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NEWER DEVELOPMENTS IN THE TREATMENT OF HEART DISEASE*

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Bed Rest in Heart Disease. One of our most important therapeutic agents is regulation of the patient's physical activity. This includes such matters as under what circumstances and for how long a time bed rest should be employed, how much physical activity such as movement of extremities may be permitted, what positions may be assumed, whether the bed pan must be used or the bedside commode permitted and how the regimen of converting a bed patient to an ambulatory status should be carried out.

It has long been known that prolonged bed rest is not without undesirable features and even danger, particularly in the elderly. On the other hand its necessity under many circumstances is obvious. In the field of cardiology there has been until very recently, a tendency to advocate longer periods of bed rest than had been customary in the past for the treatment of rheumatic fever and various forms of cardiac failure. Moreover the recognition of acute coronary occlusion and the nature of the myocardial involvement incident to such an episode made it appear logical to keep the patient in bed a long time in order that his damaged heart might be permitted to heal with as little strain as possible.

If one searches for evidence to justify the recommendation made in this domain of physical medicine he will find little in the way of controlled studies to help him decide whether they are justified. One sees patients with acute coronary occlusion who continue their ordinary activities without interruption, some because they disregarded medical advice and others because the true nature of their illness had not been recognized in its early stages. These are obviously not the hard hit patients. Nevertheless many of them have done well, in fact sometimes much better than after their condition was recognized and they were placed in bed. Because of such observations, it has been my personal rule for a number of years to advise against complete bed rest in patients who have remained active for a week or longer, following attacks of acute coronary occlusion without getting into serious trouble.

The overcrowding of hospitals during the past two or three years has made it necessary to think about the problem of the increased demand for the use of beds. It was therefore inevitable that the seemingly inordinate length of time some cardiac patients have been kept in bed should be reviewed. As a result, much criticism of the conventional practices has developed. Perhaps the most extreme position has been taken by Dock who in a recent paper entitled "The Evil Sequelae of Complete Bed Rest" says—"The physician must always consider complete bed rest as a highly unphysiologic and definitely hazardous form of therapy, to be ordered only for specific indications and discontinued as early as possible."

If we ignore the theoretical objections to bed rest propounded by some of the advocates of change there still remain weighty arguments for their position. There are strong reasons for suspecting that the incidence of phlebothrombosis and consequent pulmonary infarction is increased by complete bed rest. Doubtless some of the cases diagnosed by the previous generation of physicians as hypostatic pneumonia belong in that category. A second possible objection is the reduction of blood flow caused by bed rest which may favor the development of arterial thrombosis. A third objection sometimes overlooked is the disastrous psychic reaction that may develop in part at least from too prolonged bed rest. There is danger that the patient will lose the will to recover as is so common in those eli-

* From the Robinette Foundation, Medical Clinic, Hospital of the University of Pensylvania. Read before the Medical Society of Delaware, Lewes, September 12, 1944.

gible for permanent disability benefits. A superstructure of psychoneurotic symptoms may be erected in those vulnerable to disorders of that nature which may cause more disability than the heart disease itself.

To point out the disadvantages of bed rest does not of itself make a case for drastic change in the practices that have developed from trial and error methods. The burden of proof belongs on the advocates of change. It is extremely difficult to obtain evidence as to the comparative value of longer or shorter periods of bed rest in cardiac cases. One of the main reasons is that few cases are nearly enough alike to warrant comparison. If there is any field in which treatment has to be a highly individual affair and too much in the way of standardization ought not to be tolerated, it is heart disease. For example keeping every patient in bed six weeks after an acute coronary seizure irrespective of the severity of the lesion, does not appeal to one's common sense. Many physicians with whom I have discussed the matter keep their coronary cases with mild manifestations in bed that long only to protect themselves from criticism. If the advocates of shorter periods of bed rest can free the profession from bondage to those who try to standardize everything, it will be a real service.

The Treatment of Rheumatic Fever. Much progress is being made toward a better understanding of rheumatic fever and its treatment. The evidence for the importance of acute streptococcal infections, particularly throat infections as a link in the chain of developments which cause attacks of rheumatic fever is now so strong that there seems little reason not to accept it. Thus the problems of preventing both initial attacks of rheumatic fever and reactivation is now open to attack by preventing streptococcal throat infections. It is probable that the spectacular success obtained in preventing rheumatic reactivation by the use of small prophylactic doses of sulfanilamid results because this procedure makes the patient practically immune to streptococcal throat infection while he is taking the drug. However, the moment that invasion of the throat begins the sulfonamid group of drugs, although they may cut short the duration and severity of the throat infection itself has no value whatever in protecting against the development of rheumatic fever. It is probable although so far as I am aware not yet established, that the same will prove true of Penicillin because it, like the sulfonamides has no value in the treatment of rheumatic fever.

Coburn believes that the use of salicylates in moderate dosage following throat infections may have considerable value in preventing the development of rheumatic fever. He also believes that the actual attack of rheumatic fever can be aborted by extremely large dosage of salicylates and the maintenance of a high salicylate blood level. If Coburn's observations are confirmed by others, they will constitute a major advance in the management of rheumatic fever.

Digitalis. Interest has been aroused during the past few years in the digilanid C fraction of digitalis lanata.* One of the advantages of this fraction is that it is a single chemical compound and therefore does not require biological assay for potency. Pharmacological studies appear to have shown that it has a relatively greater effect on cardiac contractility in proportion to its effect on other cardiac functions than do preparations obtained from digitalis purpurea. On the other hand there are some reasons for believing that its absorption from the gastro-intestinal tract is somewhat less reliable than that of digitalis purpurea compounds. It can be used for all the conditions in which digitalis purpurea preparations are indicated, and may have special value in cases in which full digitalis effects cannot be obtained with digitalis purpurea because of nausea and vomiting or cases in which congestive failure cannot otherwise be relieved.

Recent studies appear to have shown that of all the preparations of digitalis tested, digitalin is most rapidly and completely absorbed so that in contrast to other preparations, the difference between the oral and intravenous dosage required to produce results is small. In this respect it has a great advantage over digilanid C in which the oral dose required to produce results may be much greater than the intravenous dose.

On attending a recent meeting in Mexico City, at which there was an exhaustive discus-

* Sold under the trade name "Cedilanid."

sion of the use of digitalis and digitalis like drugs, it developed that there is a great deal of difference between the practice of our Latin American confreres and ourselves. They follow the French School, notably Vaquez, and enthusiastically favor the use of ouabain intravenously for the treatment of severe heart failure. There is no doubt that this procedure produces results more rapidly than the oral administration of powdered digitalis leaf but whether it possesses any other advantages has not as yet been established. Digilanid C has also been found to act very quickly when given intravenously for congestive failure or auricular fibrillation and in the latter condition may slow the ventricular rate quite markedly within twenty or thirty minutes.

No physician needs to be told that digitalis, despite its remarkable virtues as a therapeutic agent, is a deadly poison when administered in overdosage. The manner in which digitalis alters the cellular physiology of the heart muscle fibers to produce its effects is still a complete mystery. The characteristic changes produces in the electrocardiogram when the heart is digitalized are deformity of the T wave and the negative RS-T segment displacement. My colleagues, Drs. Bellet, Livezey, Murphy and I have been able to show that if only the external or epicardial surface of the heart is exposed to an ouabain solution, positive rather than negative RS-T segment displacement develops in leads with an exploring electrode on the epicardium or anterior chest wall. Moreover the pattern of changes is different from those produced by KC1, $CaC1_2$, epinephrin or anoxemia. Such findings would appear to indicate that digitalis like substances tend to interfere in a characteristic manner with the migration of potassium across the cell membrane during excitation. We were also able to show that localization of trauma or chemical effects to the endocardial side of the heart muscle produces positive RS-T segment displacement within the ventricular cavity but on the other hand negative displacement at the epicardial surfaces or anterior chest wall. In the meantime Barnes and his colleagues at the Mayo Clinic have shown experimentally that digitalis in large doses produces cytotoxic changes in the myocardium and that these changes tend to be localized to the endocardial side of the muscle. These observations give us a much better understanding of the nature of the electrocardiographic changes produced by digitalis and indicate the necessity for extreme caution in the use of that drug when these changes become marked. In the studies by Barnes and his colleagues, it was also clearly demonstrated that digitalis in large dosage is capable of producing cellular damage in the brain. This finding may have some bearing on the old controversy as to whether digitalis is capable of producing "cardiac psychosis."

It has long been suspected that digitalis increases the propensity toward vascular accidents. One explanation that has been offered is that by increasing blood flow particularly in patients with mitral stenosis or auricular fibrillation, thrombi are swept away from the left auricular appendage into the general arterial circulation with the production of embolic phenomena. However, recently De Takats and his colleagues appear to have shown that digitalis increases the tendency of the blood to coagulate. This work if confirmed will furnish a far better explanation for the vascular accidents which follow the use of digitalis. In any event it has recalled attention to one of the hazards incident to the use of this valuable drug.

Theophyllin. During the past few years, the usefulness of theophyllin compounds in the treatment of various manifestations of heart disease and also of bronchial spasm has been firmly established. Its effects can be most clearly observed when it is given intravenously for such conditions as severe cardiac failure, intractable anginal pain or bronchial spasm produced either by sudden left heart failure or asthma of allergic origin. In many hospitals, including receiving wards, intravenous injections of theophyllin compounds is carried out by internes without much thought of its possible danger. Nevertheless reports of deaths from this procedure are increasing rapidly. It is only fair to say that in many such cases the patients were in such desperate condition that death could have occurred at any time irrespective of medication. However, when death occurs

within five minutes of the time of the injection, as is sometimes the case, it seems not unreasonable to assume that the injection had something to do with it. I believe that these accidents can be prevented by giving the injection slowly. It is possible that ten to fifteen minutes per injection will prove slow enough. My personal practice at present in profoundly ill patients is to have theophyllin ethylen diamin given by slow intravenous drip, using 0.5 gm. of the drug in 200 c. c. of 10% glucose solution. This dosage can be given during the course of two or three hours and repeated as often as necessary. I have never seen the slightest reaction to this procedure.

Mercurial Diuretics. Several case reports have appeared recently describing the use of mercurial diuretics intravenously at frequent intervals over the course of years so that the total amount injected was quite large. The point of special interest has been the excellent tolerance of kidneys to this procedure despite the well known nephrotoxic properties of certain of the inorganic mercurial compounds. In the past, the presence of albuminuria has frequently been regarded as a contra-indication to mercurial diuretics. As a matter of fact the albumin may be caused by congestive failure, the condition for which the use of the mercurial is indicated. The actual grade and forms of renal disease which provide a contra-indication to the use of mercurial diuretics, so far as I am aware, have never been determined. However, short of fixation of specific gravity or renal failure there seems little reason to withhold mercurial diuretics when they are needed because of fluid retention resulting from heart failure.

Sulfonamides and Penicillin. I wish to refer only briefly to the use of these agents in heart disease, particularly because of the fact that penicillin is to be discussed in the next presentation and its use in subacute bacterial endocarditis as well as in other infections belongs in that presentation. However, it is a matter of vital importance to control infection as promptly and effectively as possible. Thus the indications for the prompt use of these chemotherapeutic agents are in no way lessened by the presence of heart disease. Moreover it has seemed to me that we should be prepared to use them in lower grades of infection in cardiacs than in non-cardiacs.

Hesperidin and Rutin. One of the newer developments of considerable interest is the effect of certain extracts of orange or lemon peel or plants such as tobacco in converting the state of pathologically fragile minute blood vessels to normal. Dr. John Q. Griffith, Jr. and his colleagues have shown that about 20 percent of patients with hypertension have abnormally fragile vessels. In nearly all, this condition disappears after a number of weeks of treatment with hesperidin or rutin. To what extent such a procedure will prevent vascular accidents in hypertensive individuals has not as yet been ascertained, but there is already some evidence to suggest that these new extracts will prove to have real clinical value.

Renal Extracts for the Treatment of Hypertension. The promise of a few years ago that depressor renal extracts valuable in the treatment of hypertension would become available for general use, has not as yet been fulfilled. Page and his co-workers are apparently continuing their efforts in this direction and believe they have improved the quality of their extracts and are able to obtain good results with them, but the quantity that can be manufactured is so small that large scale studies are not possible. The solution of the problem of treating hypertension by depressor extracts now looks to be some distance in the future.

Surgery. The wave of enthusiasm of some years ago for total removal of the thyroid gland as a procedure for treating chronic heart failure or intractable angina pectoris has subsided, but there remain certain indications for its use. When both hyperthyroidism and structural heart disease are present, it is usually advisable to have the thyroid gland totally removed. In patients without hyperthyroidism but with auricular fibrillation in whom the ventricular rate cannot be brought under adequate control by digitalis, the problem is sometimes made much easier by total thyroidectomy. Extremely nervous types of individuals with intractable angina pectoris or recurrent congestive failure may develop a relaxed nervous state fol-

lowing total thyroidectomy and marked benefit to the cardiac condition may follow.

The operation of litigation of patulous ductus Botalli has established itself as a complete cure for that form of congenital heart disease. One of the still unsettled questions is whether the operation will render these patients less vulnerable to subacute bacterial infection. If it prevents that condition the indication for operation will undoubtedly be extended to nearly every child with patulous ductus uncomplicated by other forms of congenital anomaly. The mortality in the hands of an experienced operator and skilled anaesthetist is remarkably low, far lower than the 25 per cent estimated chance of bacterial infection. Three definite indications for the operation at this time are as follows: (1) Retarded physical and/or mental development, (2) evidence of cardiac strain of which the most important is cardiac size, and (3) superimposed streptococcus viridans infection. Gross has recently favored division and closure of the ductus but as Blalock has pointed out this is a more difficult and dangerous operation than simple ligation.

One of the newer developments of considerable interest is Blakemore and King's electrothermic method of coagulating aneurysms. By introducing fine silver wire in 10 meter segments, regulation of a direct current and calibration against changes in resistance of the wire on heating, a wire heat of 80 degrees C. is obtained which produces a tenacious clot. Pain is said to be relieved promptly and in more than 50 cases only one ruptured in the absence of infection.

Another interesting contribution of Blakemore, in association with Lord and Stefko, has been the anastomosis of severed arteries by using vitallium tubes as a prosthesis for vein grafts. Veins to be used for grafts can be preserved by quick freezing in a mixture of alcohol and dry ice and kept in the frozen state. No sutures are used in the procedure. Penicillin is employed to prevent infection and heparin to prevent clotting. Blalock states that many extremities that would otherwise be lost can be saved by this method.

The operation of sympathectomy for essential hypertension has gradually been gaining wider acceptance during the past few years. There can no longer be any doubt that in carefully selected cases, i. e., those who are not too old and disease of the arteries, heart or kidneys not too far advanced, a considerable proportion derive benefit from this procedure. Thus, there may result not only marked lowering of the blood pressure both systolic and diastolic, but of relief symptoms such as headache and vertigo, regression of eye ground changes, improvement of renal function, diminution of heart size and reversion of the electrocardiogram from an abnormal to a normal pattern.

DISCUSSION

DR. H. S. RIGGIN (Seaford): Two drugs that were not mentioned but that we in general practice are called upon to use are morphine sulphate, when called in to a case with extreme angina pain, and quinidine sulphate. What is the best thing to do? We usually use quinidine sulphate in the case of auricular fibrillation.

DR. E. R. MILLER (Wilmington): I feel that after such a fine talk there should be several discussions or else Dr. Wolferth might feel that it was not of interest to us. I should like to say that the newer developments which he has brought out in heart disease have added a lot to the treatment of the different types of treatment, especially the question of bed rest which has been so popular. In August I spent the month with Dr. Levine. In making rounds it was quite interesting to hear him say "Get them out of bed." Of course, the pendulum has swung out from keeping these patients in bed so long and I believe it can swing out too far, as it always does in any new movement. Each case is an individual case. There is no question that bed rest is not just the one treatment. I remember in the medical service at Delaware Hospital heart cases would come in in failure and we would put them to bed. These patients were at home getting along pretty well. They would come to the hospital and die after a day or two. I do feel that the treatment now being put forward so that there is not so much change in equilibrium is a step in the right direction. In some of Dr. Levine's cases merely an elevation in the head of the bed seemed enough to make a change for the better; the patient improved. On our failures we have been do-

ing this in enough cases to prove its value. Sometimes a patient says he feels better in a chair so that he can get his breath. We have not been following what they themselves feel to be most comfortable.

I have sent two patients up to Dr. Smithwick for sympathectomy who have been extremely gratified with results, something about the operation which seems better than the previous method. It is quite expensive and a gamble, but if the proper patients are chosen the prognosis can be changed from grave to favorable. In the patulous ductus Botalli, early diagnosis and early operation yield better results. We had a girl of 25 who did not suffer too much, but at operation she had dilatation of the heart and they worked over two hours to keep her heart going. Dr. Gross explained that the most difficult cases are over the age of 20. I had a case who was given penicillin; appetite improved, gained 40 pounds, and doing very well at last hearing.

DR. WOLFERTH: In regard to the use of morphine sulphate, it has been our practice to start with 1/6 gr. and give injections as often as necessary. Certainly morphine is a very valuable drug but I do think it is not without danger. I do not think it wise to give 1 gr. as a primary dose. Quinidine sulphate is certainly valuable in auricular fibrillation. We usually give small doses two or three times a day. I have never seen the slightest danger in its use in moderate doses. It has value particularly at thyroidal operation in which fibrillation persists.

I agree with everything Dr. Miller said. I do not want to leave the impression here that would lead anyone to subject a patient to danger by getting him out of bed too soon but we should think about this matter of bed rest in connection with every patient.

The ductus Botalli is an extremely fragile structure in some patients which increases the danger of operation. Because penicillin will cure a great many of the cases with bacterial implantation, the need for operation is not so urgent as it was.

ROCKY MOUNTAIN SPOTTED FEVER*

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It is my purpose to illustrate by case citation some of the fairly well demonstrated features of this disease and of its care. Any discussion of tick fever necessitates a certain amount of unavoidable repetition, but I assure I am alert to this tiresome fault and will avoid it if possible.

By definition tick fever—or Rocky Mountain Spotted Fever is an ailment of man produced by infection with one of the Rickettsias (which are gram-negative micro-organisms typically found in certain insects). In man the infecting organisms concentrate in the endothelium of the smaller blood vessels and, by this peculiarity, produce the hemorrhagic or petechial spots characteristic of the disease, and obviously, by the extent of the damage they so inflict on the arterioles, determine the outcome of the case.

The transmitting agent to man is the wood or the dog tick—there is no evidence to the present that any other insect than the ticks transmit the disease. The tick itself suffers no ill effects, in contradistinction to the louse conveying typhus which actually suffers a fatal illness. The various stages of the tick (there are three—larval, nymphal, and adult) are all capable of transmitting the disease. Ticks hibernate over the winter and this is a fact of clinical importance. The virulence of the disease as transmitted by any one tick depends on the activation of the virus in that tick by a recent meal of blood. Hence the first host of any particular tick in a given season will suffer a less severe infection than later hosts of that tick during the same season. This, in turn, means that the earlier cases in any given year are likely to be the lighter ones. (chart.)

The rapidity of onset after bite would naturally be expected to run parallel to the severity of the disease and this is borne out by experience.

A woman of 52 removed a tick on Wednesday evening. The following Tuesday she became ill and developed typical rash. Ultimate recovery following serum. Interval six days.

A man of 54 removed a tick on Saturday and became ill on Tuesday (interval of three days). He died 23 days later.

* Read before the Medical Society of Delaware, Lewes, September 12, 1944.

The usual interval between bite and onset of illness is about four or five days, with extremes of two days and nine days.

However, a sign of greater prognostic value is the rapidity of spread of the rash. The first rash is apparent on the wrists and ankles and in the average cases takes more than three days to spread to the trunk. When the spread is more rapid than this the outlook is correspondingly poorer.

A child of 6 required twelve days (this is extreme) to reach the fullest extent of the rash and recovered.

A man of 56 had a total rash within 6 days from bite and 2 days after initial rash, and died.

The character of the rash was petechial, signifying frank skin hemorrhages, in all of the cases which progressed to death, while hemorrhagic spots are rarely observed in the cases which recover.

The influence of age is not apparent. The recovered cases ranged in age from 6 years to 76, while those which had a fatal outcome were from 30 to 56 in this small series. Obviously the weak or infirm are less able to stand a continued fever than the sturdier person but age itself appears to have slight influence on the course of the disease.

Any patient surviving beyond the fifteenth day is likely to recover. Supporting this is the fact that the recovered cases were ill from 20 to 52 days total, while the fatal cases had terminated by the 8th, 12th & 22nd days, respectively.

DIAGNOSIS

I shall not attempt to go into detail about the diagnostic features—suffice to state that there are no characteristic features except the rash. This is striking and could probably be confused only with other Rickettsial diseases, notably typhus in either epidemic or endemic form. However, there is a firm difference between the rash of tick fever and that of typhus. In tick fever the rash spreads centripetally from wrists and ankles to trunk, and in typhus the route is reversed. The Weil-Felix reaction often relied upon is not specific, never differentiates between the two and is often positive even in other conditions. Furthermore, by the time it is positive, the disease is advanced into the second week. The rash makes the diagnosis. I can think of one condition that might be confusing although I have not seen any such situation. This is some form of drug rash. Dermatitis medicamentosa is notoriously variable and I can conceive that there might be some drug rashes which would closely simulate tick fever rash.

The use of therapeutic serum seems to be the only procedure that offers any hope of influencing the disease at the present time. The sulfonamides, metaphen, penicillin, arsphenamine,—have all been used without any significant effect. Serum from patients recovered or convalescing from the disease have also failed.

The present serum is a hyperimmune rabbit serum prepared by producing antigenic response to the tick virus, and has been proven of definite value in curing the experimental disease as produced in monkeys and guinea-pigs. I can report the use of the serum with two cases, with one recovery and one death. (I have seen only three cases since the serum became available and one of these was moribund when first seen). There was one signifiant difference between the two cases treated with serum. One patient came under care early and received serum within four days of bite; the one who succumbed delayed seeking advice and did not receive serum until 10 days after bite and by this time the rash was total. The opinion among those working with the disease is a guarded one but evidence seems to be accumulating that the rabbit serum does have a favorable effect, but it must be given early, certainly within three days after first appearance of the rash.

The use of the prophylactic vaccine for treatment purposes is very ill-advised and can produce serious injury. Its value for prevention cannot be finally determined yet, since its use has not been extensive enough in either time or numbers to warrant dogmatic statement. But here again the weight of the evidence is favorable. There are two forms of vaccine—the original was prepared by emulsifying tick tissues infected with the organisms, the later form is prepared from chick embryos infected with the virus. There is no apparent difference in effectiveness but the chick vaccine is so much simpler and safer to prepare that it will probably supplant the tick-tissue vaccine.

The main reliance must probably always be placed on personal care—avoidance of infested regions, frequent and careful search of the body, and caution to the point of fastidiousness in handling any ticks that may be encountered.

DISCUSSION

DR. EDWIN CAMERON (Dover): Fortunately for my listeners, Dr. Worden left me very little to add. There are a few points, however, which I might call to your attention: Up until relatively few years ago the disease was apparently found only in the west, having originated in Montana, and the people who were studying it apparently felt that there was only one tick which carried it, the tick prevalent in the west. However, about 1925 the first case was diagnosed in Virginia, fairly close to the District of Columbia where the National Institute of Health had a chance to study it. The diagnosis was made and region where the case occurred was searched for ticks and another variety found which was not present in the west but inhabited the eastern seaboard. Since then other cases have been recognized, and a great many may have occurred without recognition.

The first case was recognized in Delaware in 1933, three cases occuring in Kent Co.

Dr. Worden mentioned that the three preadult forms of tick can transmit the disease, so that the nymph and larval stages prefer the small rodents to feed upon and these small rodents become reservoirs of the disease.

The first area of infected ticks was found in Kent county; then in 1936 another one began around Seaford. These two areas continued developing. A third begins around or about Wilmington. We had by 1938 three distinct areas of tick infection. There is a general tendency from 1939 to 1944 for these three to become confluent.

Of the 13 deaths that have occurred in Delaware from this fever, 8 of them have been farmers. I do not mean to indicate that this is a occupational disease, but a farmer is exposed more frequently. He is also the individual who has lived with ticks. He evidently is the person upon whom our educational process must be concentrated. One case was a child, a farmer's daughter, making nine cases occurring in farms. In one case no occupation was given. It would be interesting to go into the cases but in the early cases there were no records of occupation but the chances are that a good proportion of them were among farmers. There has been one female death. All cases so far have been white. Assuming that practically the only diagnostic feature is the history of tick bite and a rash, I doubt very much if it would be possible to be certain of the diagnosis in the negro.

There is no way of measuring the efficacy of serum as a preventive measure. It must be given annually, we know. If any steps are going to be taken, if it becomes of greater severity and steps must be taken, it would seem to me that the most valuable step would be the burning of underbrush sometime after August 1st when the ticks begin to decrease.

DR. G. J. BOINES (Wilmington): Tick fever is an interesting disease and also one which has its headaches, not because the disease is contagious but because of the rash and the difficulty of making the proper diagnosis. I have seen a number of patients given the serum and have not been impressed with the result. It does not bring the fever down and the patients have become very sick, whether it is the serum or the disease, but the serum has certainly not reduced the fever nor the amount of sickness and prostration. There is no doubt in my mind whether it does any good at all. Dr. Baker of Wyoming has described an agglutination test which he insists differentiates the disease from typhus, if used early, better than the Weil-Felix reaction. The habit some physicians have of using the sulfa drugs as soon as the patient comes in with fever is not helpful, as the patient is already very toxic from the disease and the sulfa drugs makes him more so, so that it is a question whether sulfa drugs actually do him harm.

There is a type of paralysis which is extending in type which disappears as soon as the American dog tick is removed, if removed early enough. If not, the patient develops extending, flaccid paralysis. When this is seen a tick should be suspected.

DR. H. S. RIGGIN (Seaford): Dr. Boines says that the dog tick transmits the disease.

Is the dog then dangerous? Can he transmit it?

DR. A. C. SMOOT (Georgetown): How frequently does encephalitis follow this disease?

DR. WORDEN: I personally have not used the agglutination test, but my impression is that, although Baker reports his belief that it is helpful, others do not find it so. The serum is not proven yet. The main reason for hopefulness is its definite preventive value in the few experimental animals that can be given the disease. The protective rate following the rabbit serum is 100%. Value in the human is unsettled yet.

The dog is not infected with the fever. The question of tick paralysis: the location of the tick determines whether the individual is going to develop tick paralysis. It is possible for a person to have a tick attached and produce tick paralysis and not spotted fever. On the other hand it is possible to have one tick and both manifestations appear. In order to develop tick paralysis the point of attachment must be reasonably close to the head. Attachment to the lower portions of the body I do not believe has ever produced tick paralysis.

THE DOCTOR AND THE HORSELESS CARRIAGE

Medicos Credited With Auto Development

New laurels are added to the already notable scientific and humanitarian record of the American doctor—especially the country doctor—in a fascinating new book "Combustion on Wheels," by David L. Cohn, (Houghton Mifflin). For it seems the doctor, graduating from his horse and buggy into the horseless carriage, was among the first daring pioneers to set the automobile in a respectable niche in public opinion. It was the doctors, Mr. Cohn concludes, with their natural flair for science and mechanical contrivances who not only bought and used cars but repaired them themselves in days when skilled mechanics were rarer than veterinaries. What's more, they kept accurate records of costs and repairs which were invaluable to the automobile makers in improving their product.

Mr. Cohn, who will be remembered for his immortalization of the mail order catalogue in a previous volume "The Good Old Days," says in "Combustion on Wheels": "Doctors were the first large group to experiment seriously with the car as a practical vehicle, keep records of its costs and performances, and on the basis of these records, decide that the car had come to stay, when all-wise bankers still held that it was only a passing fad. The very fact that they approved of it, moreover, was one of the most convincing arguments that could be made in its favor. The reasons are clear.

"Can you depend upon the car to get you there and back? Will it plow through mud and sand? Will it climb hills? Is it more expensive to maintain than a horse and buggy? Will it give you your money's worth? These practical questions were uppermost in the public mind in 1905 as it looked skeptically at the automobile, and until they were answered satisfactorily the car would remain a plaything of the rich. They were first reassuringly answered by the country doctor, and his words carried weight because he was by temperament cautious, conservative, and slow to adopt new methods, while the nature of his profession required him to put the automobile through the most rigorous tests. He, more than any other man in the community, had to go out in all kinds of weather on all kinds of roads. Others could afford to be late for an appointment. He could not because the issue of life or death might devolve upon his promptness or tardiness."

He offers particular credit to Dr. F. M. Crain who lived in Redfield, South Dakota, in 1905. Dr. Crain, disgusted with his balky car and the impotence of local mechanics learned to "drive by ear," using his stethoscope and anatomical knowledge to diagnose the assorted gurgles, clanks and groans of the engine.

Dr. Charles Sylvester of Dorchester, Massachusetts, kept a careful record comparing his auto costs with the upkeep of his horse and carriage. He reported that after seven months the car cost him $159.75 against $268.10 for the horse and carriage. The automobile expense log included such items as "$5.25 for loss of eyeglasses while raising a 30 mile breeze in the woods" and "Repair of a bicycle which ran into me: $2.50." Dr.

Sylvester also noted that "several dogs which tried a similar blackmailing scheme were repaired by me without expense."

Dr. J. C. Stinson, living in San Francisco about the same period, had a more discouraging experience to record. He became the victim of a "cannibal mechanic" and his repair bill for a single cylinder car which had cost $983 in the first place ran up to $566 for three months. "If these charges are not enough to make a man wild," he writes, "I don't know what else would."

But while this sort of thing was going on, Mr. Cohn records that Henry Ford and his contemporaries in Detroit were almost ready to release the famous Model T. He and other present day auto makers acknowledge their debt to the country doctor for his pioneering use of the horseless carriage.

CRITICAL NEED FOR NURSES

With a critical shortage of nurses for the armed forces—eleven army hospitals are about to go overseas without any nurses—hospital administrators and physicians must do everything they can to help meet this critical need by releasing nurses for military duty, *The Journal of the American Medical Association* for January 6, declares. *The Journal* says:

"Mr. Basil O'Connor, chairman of the American Red Cross, sent to every chapter last week an appeal for an immediate maximum Red Cross effort to secure 10,000 additional nurses needed by the armed forces. The rapidly mounting casualties in Belgium demand a maximum of medical and nursing care. Eleven army hospital units, Mr. O'Connor reported, are about to go overseas without any nurses—a condition unprecedented in the months to come. The patient load in far from being ended, yet already the need for careful rationing of nursing service has been demonstrated. That need will intensify in the months to come. The patient load in army general hospitals in the United States has more than doubled in the last nine months without the necessary increase in nurses.

"The Red Cross, in its messages to the public, has emphasized ways in which the public can help in saving nursing service and thus release nurses for military duties. The physician can help by making certain that nurses are assigned only to cases in which nursing service is absolutely essential. The employment of special nurses for any except critical illnesses is unwarranted. Nurses are being used in hospitals occasionally for services other than actual nursing. These are services in which a nurse's aide, a dietetic aide or some similar temporary assistant might be helpful. They can help by urging every nurse and retired nurse not eligible for military service to take an essential nursing job and thus to fill the ranks on the civilian front. Doctors can be helpful by urging every registered nurse available for military service to submit an application.

"Practically every American family has at this time a son, a brother or an immediate relative in the armed forces. It takes good nursing to bring about recovery of those wounded in battle. The ratio of nurses in our military hospitals in this country is 1 to every 22 patients and abroad 1 nurse to every 12 patients. In many of our civilian hospitals the nursing staff today is 1 to 3, 5 or 8 patients. The administrators of hospitals can aid greatly by making sacrifices to release some of these nurses for military duties. As Janet M. Geister, editor of the *Trained Nurse and Hospital Review,* has emphasized, there is not an instance on record of a nurse putting herself on a case. Only doctors and hospital administrators prescribe nursing. The nurse depends on the doctor for her release from civilian duties. As long as the doctor says to her 'You are needed here just as much as you are out there' she can cheerfully avoid applying for military service.

"Attention must be called particularly to the wasteful use of nursing service at this time by large industries, which keep nurses sitting idle much of the time in first aid stations and industrial dispensaries. The unnecessary full time employment of nurses as bystanders in physicians' offices must also be controlled. Under the stress of war, doctors can well afford to permit women patients to prepare themselves for examination or at least to train the office secretary or attendant in these none too technical duties.

"Latest reports from the Army and Navy

(Continced on Page 12)

Editorial

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THE STUBBORN SHORTAGE OF ARMY NURSES

Forty-six WACs are training as medical technicians at Woodrow Wilson General Hospital, near Staunton, Va. They are being trained in order to meet in some degree the critical shortage of nurses there. Already, according to one hospital executive, they are worth their weight in gold.

In an article in *The Sun*, Mr. Albert W. Quinn describes the situation at Woodrow Wilson General, where there are 1,700 soldier patients. The hospital's authorized strength in graduate nurses is 98, but it has never had that number. Today it has 60 and in November it had as few as 48. Graduate nurses are needed for administrative jobs and in the operating rooms, and those left over are spread thinly through the wards. They would be spread even more thinly were it not for the WACs.

The graduate-nurse shortage is not peculiar to Woodrow Wilson General. It is duplicated in army hospitals in other parts of the country because of the mounting casualties. For example, according to Maj. Gen. Norman T. Kirk, surgeon general of the Army, there are at Percy Jones General Hospital, Battle Creek, Mich., only 85 graduate nurses to care for 3,699 patients. In contrast General Kirk cites a civilian hospital in New York City which has 743 patients and 825 nurses on its staff.

While the WACs are training as hospital technicians, where are the available graduate nurses? Last October, says General Kirk, the Army sent out an appeal for volunteers to 27,000 declared to be available by the War Manpower Commission. To this appeal only 760 answered, and of those who answered only 227 signed up.

Here in Maryland the quota for the Army Nurse Corps for the last half of 1944 was 208. The year ended about 100 short of the quota. Out of 41 members of a recent graduating class in a local training school only 4 have signed up for the Army Nurse Corps, although many of them are Nurse Cadets who have received tuition and board, books, room and uniforms from the Government in the hope that they would, upon graduation, volunteer for army service. Of 40 cadets who completed their training at Woodrow Wilson General last August only 42 per cent joined the Army Nurse Corps.

The apathy, especially among the younger nurses, in the present emergency is astonishing to older nurses who grew up in the Florence Nightingale tradition. But what mortifies them most is that WACs should be stepping into the breach while many graduate nurses elect to remain at home.—Editorial, *Balto. Sun*, Jan. 6, 1945.

A criticism of THE JOURNAL that recently came to our ears was to the effect that we do not print news of our men in the services. This criticism is not fully justified: on one occasion we devoted a whole issue to the military. But, for too many months recently, there has been little or nothing. This is not the fault of THE JOURNAL: news items have

not been sent to this office. If the men in the services could find the time to write us letters telling about themselves, their work, their experiences (they can't *all* be sad) and anything they want their colleagues at home and abroad to know, we shall be mighty glad to print the letters. We can't invent the news; we can and will print it, as, when and if we get it.

The first printing of the Directory Page, in this issue, tells who's who in our medical and correlated societies for the year 1945. It would be a miracle if there were no errors or omissions. Please send us, promptly, any corrections that should be made.

It's too late to say "Happy New Year" now and get the kick that came when you read it two week ago. Nevertheless THE JOURNAL does wish for its constituents, friends, and advertisers a very Happy New Year. And ye Editor, now beginning his thirtieth year on the job, hopes it may turn out to be a Happy Peace Year.

Combat Pay For Medical Units

Many will welcome assurance that the War Department is giving its attention to additional recognition for men of the Medical Corps serving with combat units. This is a matter about which the G. I.'s themselves feel strongly. They know that where there is danger, there the medic is also. They know that the call goes out for him the minute the enemy really has the range. He is as essential to victory as is the infantryman, to whom his presence may at any moment mean life rather than death. General Eisenhower has recommended to visiting Congressmen, says a wholly credible report from France, that he be given extra combat pay comparable to that of the combat unit he serves.

Secretary Stimson indicates that the case of the man of the Medical Corps presents a separate problem because of his non-combat status under the Geneva Convention, but separate insignia and a separate pay system would seem to clear that hurdle. The Secretary noted also that more Medical Corps men receive technical ratings, thus boosting average pay, but that doesn't help the medic who hasn't his rating nor compensate the corps generally when it leaves a safe spot for the shooting front. We hope for the sake of G. I.'s as well as of the men of the Medical Corps themselves, that this particular bit of justice need not be longer delayed.—*New York Herald Tribune,* December 16, 1944.

CRITICAL NEED FOR NURSES

(Concluded from Page 10)

indicate that nearly 75,000 nurses have already applied for service with the armed forces, which represents nearly 30 per cent of all active trained nurses in the country. Of the 75,000 nurses who applied, almost 16,000 were rejected. Today there are 47,478 nurses on duty with the Army, and 11,822 were rejected for physical or professional reasons. Up to December, 1944, 6,641 nurses had been honorably discharged because of medical reasons. In the Navy 15,519 nurses applied for service, of whom 11,499 were assigned to the nurse corps and 4,020 were rejected for physical and professional reasons. Honorable discharges have been given to 3,685 nurses by the Navy, principally because of marriage, as the Navy nurse corps does not accept married nurses. The National Nursing Council for War Service indicates that there are in the United States about 265,000 active nurses of all ages, married and single, and including those with children under 14 years of age. This means that there are still nurses available if the civilian institutions will recognize the need and if hospital administrators and physicians particularly will do everything that they can to release nurses to the armed forces."

MISCELLANEOUS

OFFICE OF THE SURGEON GENERAL

Technical Information Division
Washington, D. C.

Reduction In Army Medical Corps

A moderate reduction in numbers of Army Medical Corps officers is necessary in order to remain within presently allotted ceilings, the Office of the Surgeon General has announced. The need for Medical Corps Officers in the senior grades who are assigned principally to administrative duties is less acute than formerly.

A Board of officers recently appointed in the Office of the Surgeon General is carefully considering the physical and other qualifications of all Medical Corps officers of the various components of the Army and their essentiality to the war effort.

As a result of this Board's study, it is anticipated that a number of separations of the above group will occur in the moderately near future. Regular Medical Corps officers will be accorded retirement privileges under the provisions of Section II, Ar. 605-245, June 17, 1941, and Reserve, National Guard, and AUS Medical Corps officers will be given the opportunity of returning to the practice of medicine in a civilian status by relief from active duty or discharge.

Army Microfilms Medical Journals

The microfilming service of the Army Medical Library is keeping Army medical officers at remote installations in every theater of operation abreast of the latest published techniques and discoveries.

Starting with 12 medical journals in January, 1943, the list of periodicals microfilmed has grown to 44, covering the whole field of medicine. These are filmed immediately upon publication. Sent by airmail, military intelligence or diplomatic pouch, the rolls of film are in the hands of Medical Department personnel all over the world within 15 days.

In addition to the medical journals, unpublished manuscripts describing even more recent developments are also microfilmed, and upon request sent to our military medical personnel.

The microfilm process saves approximately 95 per cent of shipping space. One 100-foot roll, for example, holds about 1300 pages or from 12 to 14 journals. Whereas one roll of microfilm weighs about six ounces, the same amount of printed material would represent six pounds.

Praises The Newspapers

Praising the American press for its increasingly active role in promoting the health of the people, Morris Fishbein, M. D., editor of *Hygeia, The Health Magazine* of the American Medical Association, says in an editorial in the January issue that if there is any one complaint to be made about medicine in the press today it is the occasional stirring of public emotion about some long-continued, probably fatal disease affecting a child. He points out that such types of stories are bad mental hygiene for the American people. Dr. Fishbein says:

"The functions of the press in the dissemination of information regarding health and disease have been the subject of innumerable conferences, symposiums and debates before organizations of newspaper editors, physicians and the general public. The good that can be done by the newspapers of this country in relation to the advancement of medical care is simply incalculable. The dissemination of information regarding the state of the nation's health as reported in sickness, in death rates, in birth rates, and in regard to the increase or decrease of various diseases, serves as a stimulus to special efforts and intensive drives. During the hearings before the Senator Pepper Committee in Washington recently, facts were brought out relative to the reactions of young men coming before Selective Service boards. The publicity given to these facts has served to stimulate a nation-wide drive for physical fitness which is being reflected in every state and county in the country.

"Many of our newspapers publish health columns which provide daily advice regarding the progress of science against disease. These columns tend to inculcate good health habits. Most of those that now appear are written by men who are physicians and are competent as regards both their medical knowledge and their ability to present scien-

tific material in simple language. Twenty-five years ago there were three or four health columns devoted to the promotion of bizarre notions about diet and about medicine. Today there is only one such column having a national circulation. In the promotion of the blood donor campaign of the Red Cross, newspapers throughout the nation have rendered a most valuable service. Many a newspaper now puts the appeal for blood donors in a close relation to the casualty lists as they are published day by day. These campaigns have done much to keep a steady flow of donors moving into the collecting stations and blood banks of various Red Cross chapters and hospitals.

"If there is any complaint to be made about medicine in the press these days, it has to do with the occasional stirring of public emotion in relation to some long-continued, probably fatal disease affecting a child. Recently two cases have been prominent in the press of the nation; one a child with leukemia, apparently alive only by innumerable blood transfusions. The day to day progress of this case has been noted in the press, invariably with emphasis on the inevitably fatal character of the disease. From a mental point of view this is exceedingly unfortunate, because there are many cases of leukemia in the United States besides the one given all the publicity, and all the parents and all the friends of these other patients are constantly being reminded about the inevitable death. Another case representing a type that is often given tremendous publicity is a case of Wilms' tumor, a malignant condition affecting the kidney, in which, as far as we know, death almost invariably occurs. True, an occasional instance has occurred in which operation and x-ray treatment have postponed death, but it benefits neither the patient nor the public to have the despair associated with these cases constantly dinned into the public ear. The creation of hysteria and unnecessary anxiety is bad mental hygiene for the American people. It requires no special talent to arouse sympathy for a sick or dying child. Why cannot newspaper editors ask themselves the question: 'Is this really necessary or desirable?' "

Progress In Program For Medical History

According to a report from Colonel Albert G. Love, historian of the Army Medical Department, plans have been made to complete the medical history of World War II six months after victory in the Pacific. Several officers are now assigned to the historical program, approximately half of them serving in overseas theaters. Most of these officers hold graduate degrees in history from leading universities throughout the country. They were commissioned in the Medical Administrative Corps following completion of training in Officer Candidate Schools. These officers are working on the administrative aspects of the medical service including supply, personnel, training, and hospital construction. The professional medical experience of the Army will be recorded by medical officers especially qualified in various specialties.

By means of this well-manned staff, the history of the Medical Department in the current conflict should be completed within the time limit set by Colonel Love. Previous histories published by the Medical Department appeared several years after the cessation of hostilities. Twenty-three years were required to complete the medical history of the Civil War; ten years to complete that of the first World War. Early publication of the current history will be advantageous in that many of the administrative and scientific advances in military medicine will be applicable in planning for national defense and civilian practice. Thus the things which the Army is learning today on the world's battlefronts—improved methods of collection and evacuation of the wounded with prompt treatment, better medical and surgical care, the use of new drugs and appliances, control of communicable diseases, advances in reconditioning—are destined to reach the public domain while the knowledge acquired by the Army is still fresh.

At a meeting of historical officers held in the Office of the Surgeon General on December 6, announcement was made that sufficient volumes would be published to cover the entire scope of the Medical Department's professional and administrative work. Material for the series of volumes is rapidly accumulating from installations in this country

and overseas. Colonel George R. Callender, Director of the Army Medical School, stated that excellent reports on missile casualties have been received for the volume on wound ballistics covering several campaigns.

The series of volumes gives promise of being the most complete and revealing chronicle of military medical advances ever compiled. The Surgeon General and other authorities in the War Department are lending full support to the historical project.

[Ed. Note—The Library of the Delaware Academy of Medicine, Wilmington, contains an almost complete set of the *Medical History of the Civil War,* and a complete set of the *Medical History of World War I.*]

Unusual Bravery Of Medical Corps

The heroic and self-sacrificing acts of many men of the medical corps have been repeatedly noted under Medicine and the War in THE JOURNAL. Feats of combat pilots, gunners, submarine crews, pioneer troops and tank crews are frequently vividly described in the newspapers. Physicians with the armed services are daily performing great and small acts of heroism in the care of the sick and injured. Often their work is unnoticed beyond the small group in which they regularly do their professional duties. A War Department release of November 19 announces the award of the Silver Star to five men, of whom three were members of the Medical Corps of the Army of the United States. Among twenty-two men awarded the Bronze Star Medal, seven were medical officers and eight enlisted men of the Medical Department. Nearly all of the citations were given for the high devotion to duty displayed by medical officers in going to the aid of wounded soldiers in the face of intense enemy infantry and artillery fire with utter disregard for their own personal safety. This record all doctors may share with pride.—*The Journal of the American Medical Association.*

Head-Wound Gas Mask

A gas mask to protect head wound patients from war gas has been developed by the Chemical Warfare Service at the request of the Medical Department, and is now in production, the War Department has announced.

The mask is the first such device especially designed to protect patients with bandaged heads, faces, or jaws. It consists of a silk-like plastic hood to which an air-purifying canister and an outlet valve are attached. A flexible window across the eyes provides clear vision. Air is drawn into the mask by the ordinary breathing of the wearer.

The mask is pulled over the head like a sack, and experiments at the Medical Research Laboratories have shown it to be comfortable to the wearer as well as efficient.

Families To Receive Reports From Overseas Hospitals

Under a new plan adopted by the War Department, the family of a wounded or seriously ill soldier is to be kept informed of his condition by the overseas hospital. The first letter dispatched to the family will contain a brief non-technical description of the soldier's wounds or the nature of his illness. A post card on the soldier's condition will then be mailed his family every fifteen days. In return the family is urged to send the overseas patient a "message of cheer" at least once a month.

Improved Food Package For Invalid Prisoners Of War

The latest, and third, version of the food package being shipped to invalid American prisoners of war by the American Red Cross is designed not only to build health, but to boost morale. Tempting recipes by Miss Jane Spinella of the Army Medical School give directions for such delicacies as eggnogs, custards, puddings and welsh rarebits and suggest how to vary the dishes through the addition of flavorings. Miss Spinella also advised on the make-up of the package which contains dried milk, dried eggs, edible starch, oat cereal, salt and pepper, chicken or roast beef, tuna fish, cheese, butter spread, biscuits, peach jam, sugar, coffee, chocolate, vanilla tablets, dates, cigarettes and multi-vitamins tablets. 100,000 of these new-type packages are now ready for shipment.

Army's Plastic Eye

A new plastic eye is being made by the Army which is lighter and more durable than glass and can be tinted to duplicate the appearance of the natural eye and fitted to provide as much motility as possible, thereby avoiding the appearance of staring.

First step in making the eye is to paint the "iris"—a thin celluloid disc, only one-ten-thousandths of an inch thick. The "iris" is then embedded in a tiny plastic lens of acralain—a plastic that has been used in dentistry for the last ten years.

The impression of the patient's eye socket is made with a new type compound, an alignate plastic, that is chemo-setting. This, mixed with water to make a paste, is injected with a syringe under the eye-lid at body temperature without causing pain or discomfort. It sets to a rubber-like consistency in five minutes and is removed painlessly, giving a permanent record of every tissue contour within the socket. A plaster cast is then made from this replica and used to mold a wax model of the eye-ball. The iris button is fitted into the wax and the whole unit is then fitted to the patient. The body temperature melts the wax slightly to produce an even better fit.

A second cast is then made from this wax replica, the wax is melted away with the cavity filled with acrylic resin, tinted the shade of the patient's natural eye-ball. This is baked for an hour under a half ton of pressure. When it comes from the cast it has on its front surface the tiny disc of the iris. It is then polished and the "veins" are applied —tiny rayon fibres, an innovation by Captain Don Cash of Beaumont General Hospital, El Paso, Texas.

As a final step, the whole eye is dipped in a clear plastic solution which produces a gleaming coating similar to the layer of liquid covering the natural eye.

The plastic eye is so durable it can be dropped on the floor and stepped on without injury.

Credit for developing the eye goes to three dental officers: Captain Stanley F. Erpf, Major Milton S. Wirtz and Major Victor H. Dietz who were working independently before they were brought together at Valley Forge General Hospital to found the artificial eye laboratory. Technicians are now being trained within 90 days to make these eyes.

Greetings From The Surgeon General

During the past year, doctors, nurses, medical soldiers, litter bearers, civilian personnel, and volunteer aides of the Medical Department cooperated magnificently throughout this global war to provide the armies of the United States with the best in medical care. For your full and unselfish devotion to the care of the sick and wounded, the entire nation is grateful. As Surgeon General of the Army, I greet you with thanks to every one wherever engaged in this unprecedented humanitarian service. . .

We face now another, possibly more exacting year together determined to serve each and every patient with all of our strength and all of our skill and to uphold the highest standards of medical service. This is more than arduous work, which you have carried on many, many times in the very turmoil of battle. But your record on these distant fields is unsurpassed. Throughout the New Year, may still greater achievement, good health, and happiness be with you all.—Norman T. Kirk, Major General, U. S. Army, the Surgeon General.

BOOK REVIEWS

Modern Clinical Syphilology. By John H. Stokes, M. D., Professor of Dermatology and Syphilology, School of Medicine and Graduate School of Medicine, University of Pennsylvania; Director, Institute for the Control of Syphilis, University of Pennsylvania; Herman Beerman, M. D., Assistant Professor of Dermatology and Syphilology, School of Medicine and Graduate of School of Medicine, University of Pennsylvania; and Norman R. Ingraham, Jr., M. D., Assistant Professor of Dermatology and Syphilology, School of Medicine, University of Pennsylvania. Third edition, reset. Pp. 1332, with 911 illustrations. Price, $10.00. Philadelphia: W. B. Saunders Company, 1944.

This third edition of this book is a vast improvement over the first and second editions; this volume is further along the road to per-

fection. The arrangement has not been greatly altered but it is apparent the authors and collaborators have taken great pains to revise it in accord with the current advances in the syphilitic field.

Occuring for the first time, the chapter on penicillin and its technical uses, and the account of syphilis in public health and military medicine are new and should be of interest to all. This book, like all Stokes' books, is very comprehensive, factual and concerned with the every-day problems of syphilis; it leaves nothing to imagination. Every type and every stage is fully explained and the treatment prescribed. General practitioners and syphilologists alike should use this book as a reference.

Military Medical Manuals: Manual of Clinical Mycology: Prepared under the Auspices of the Division of Medical Sciences of the National Research Council. Pp. 348, with 148 illustrations. Price, $3.50. Philadelphia: W. B. Saunders Company, 1944.

This Manual is the work of five members of the Department of Medicine, Bacteriology and Pathology of Duke University, who say that fungus infections are of such common occurrence that they have found it necessary to consider mycotic disease in the differential diagnosis of practically every obscure infection. The average American doctor knows next to nothing about the mycoses, and has had little inclination to learn about them. The war is changing that picture, and American doctors must acquire a minimal amount of knowledge about the mycotic as well as the other tropical diseases. This short, meaty, yet ample and authoritative Manual, with its excellent illustrations and adequate index, is just what the practitioner wants. He should read Chapter xxiv on Fundamentals first. The appendix contains many items of laboratory technique and a formulary of 30 items. We heartily recommend this Manual.

The Harofe Haivri. Volume II, 1944, seventeenth anniversary issue of the Harofe Haivri, edited by Moses Einhorn, M. D., has just made its appearance. Its contents are not confined to technical medical topics, but are divided into several sections covering a variety of related subjects.

In the medical section, the following subjects are discussed: "Cesarean Section (Its Uses and Abuses)", by Dr. H. J. Epstein and a discussion by Dr. A. J. Rongy; "Malaria in Public Health," by Dr. A. J. Levy; "Stricture of the Rectum," by Dr. E. Rapaport; "Cancer of the Skin," by Drs. O. L. Levin and H. T. Behrman; and "The Painless and Bloodless Treatment of Calcified Bursitis," by Dr. J. Echtman.

Under the heading of Jews and Health, Dr. L. Wulman, organizer of the American branch of the OSE, presents a timely article entitled OSE—Its Achievement and Plans for the Post-War Period. The OSE originated in Russia, in the year 1912, and derives its name from the initials of the Russian words, Oschestvo Zdravoochranenia Evreev, which mean "Society for Safeguarding the Health of the Jews."

In the section on Personalia, Dr. Solomon R. Kagan offers an article entitled "Jews as Nobel Prize Winners in Medicine," among whom are discussed such outstanding physicians as Ehrlich, Metchnikoff, Barany, Willstaetter, Meyerhof, Landsteiner, Warburg, Loewi and Erlanger.

In the book review section, Prof. Alexander Marx contributes a detailed review of Dr. Harry Friedenwald's excellent book "The Jews in Medicine," published by the Institute of the History of Medicine of the Johns Hopkins University. This work is the most comprehensive treatment of many of the aspects of the relationship of Jews to medicine which has ever been undertaken.

There is also a detailed English section containing summaries and translations of all the articles for those readers who do not understand Hebrew.

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W. E. Bird, Wilmington
W. H. Speer, Wilmington
W. O. LaMotte, Wilmington
J. S. McDaniel, Dover
Wm. Marshall, Jr., Milford
J. R. Elliott, Laurel
J. B. Waples, Georgetown
R. C. Beebe, Lewes

WOMAN'S AUXILIARY

MRS. E. L. STAMBAUGH, *President*, Lewes
MRS. G. C. MCELFATRICK, *Vice-Pres. for N. C. County*, Wilmington
, *Vice-Pres. for Kent County*, Dover
MRS. JAMES BEEBE, *Vice-Pres. for Sussex County*, Lewes
MRS. S. W. RENNIE, *Recording Secretary*, Wilmington
Corresponding Secretary, Milford
MRS. A. J. STRIKOL, *Treasurer*, Wilmington

NEW CASTLE COUNTY MEDICAL SOCIETY—1945

Meets Third Tuesday

L. B. FLINN, *President*, Wilmington.
IRA BURNS, *President-elect*, Wilmington.
J. C. PIERSON, *Vice-President*, Wilmington.
E. R. MILLER, *Secretary*, Wilmington.
J. M. MESSICK, *Treasurer*, Wilmington.

Board of Directors and Nominating Committee: I. L. Chipman, 1945; A. J. Strikol, 1946; C. C. Neese, 1947.

Delegates: 1945: L. W. Anderson, B. M. Allen, T. H. Baker, L. B. Flinn, G. W. K. Forrest, C. L. Hudiburg, J. S. Keyser, W. W. Lattomus, J. D. Niles, C. E. Wagner. 1946: W. E. Bird, Ira Burns, G. H. Gehrmann, J. F. Hynes, L. J. Jones, E. R. Mayerberg, E. R. Miller, C. C. Neese, A. J. Strikol, M. A. Tarumianz.

Alternates: 1945: D. D. Burch, C. H. Davis, D. T. Davidson, J. R. Downes, D. M. Gay, J. W. Kerrigan, A. J. Heather, L. C. McGee, Lawrence Phillips, C. E. Maroney. 1946: J. W. Butler, W. W. Ellis, Mildred Forman, Margaret I. Handy, T. V. Hynes, E. M. Krieger, J. M. Messick, J. C. Pierson, L. J. Rigney, P. R. Smith.

Board of Censors: L. J. Jones, 1945; L. J. Rigney, 1946; B. M. Allen, 1947; N. W. Voss, 1948; C. L. Hudiburg, 1949.

Progam Committee: Ira Burns L. B. Flinn, J. C. Pierson.

Legislative Committee: W. O. LaMotte, M. A. Tarumianz, E. H. Lenderman, S. W. Rennie, A. D. King.

Public Relations Committee: L. C. McGee, W. H. Speer, G. W. K. Forrest, W. M. Krieger, R. A. Lynch.

Medical Economics Committee: W. E. Bird, D. D. Burch, J. D. Niles, W. M. Pierson, L. J. Rigney.

Necrology Committee: J. S. Keyser, P. A. Shaw, Mildred Forman.

Auditing Committee: J. W. Kerrigan, A. J. Heather, H. W. Gray.

KENT COUNTY MEDICAL SOCIETY—1945

Meets Second Wednesday

W. C. DEAKYNE, *President*, Smyrna.
F. R. EVERETT, *Vice-President*, Dover.
H. W. SMITH, *Secretary-Treasurer*, Harrington.

Delegates: C. J. Prickett, I. J. MacCollum, William Marshall, Jr.

Alternates: Stanley Worden, S. M. D. Marshall, A. V. Gilliland.

Censors: H. V'P. Wilson, H. W. Smith, W. T. Chipman.

DELAWARE ACADEMY OF MEDICINE—1945

Open 10 A. M. to 1 P. M.
Meeting Evenings

W. H. KRAEMER, *President*.
E. R. MILLER, *First Vice-President*.
J. D. BROWN, *Second Vice-President*.
D. T. DAVIDSON, SR., *Secretary*.
J. M. MESSICK, *Treasurer*.

Board of Directors: C. M. A. Stine, J. K. Garrigues, W. S. Carpenter Jr., H. A. Carpenter, F. H. Gawthrop, Mrs. Ernest du Pont, H. G. Haskell, S. D. Townsend, L. B. Flinn, M. D.

DELAWARE PHARMACEUTICAL SOCIETY—1945

President: C. E. Johnson, Newark.

First Vice President: L. E. Wilson, Georgetown.

Second Vice President: C. A. Hopkins, Dover.

Third Vice President: Thomas Davis, Wilmington.

Secretary: Albert Bunin, Wilmington.

Treasurer: Albert Dougherty, Wilmington.

Board of Directors: C. E. Johnson, H. S. Kiger, E. J. Elliott, H. P. Jones, V. L. Larson.

SUSSEX COUNTY MEDICAL SOCIETY—1945

Meets Second Thursday—Even Months

H. S. RIGGIN, *President*, Seaford.
A. H. WILLIAMS, *Secretary-Treasurer*, Laurel.

Delegates: Bruce Barnes, G. V. Wood, O. V. James, R. S. Long.

Alternates: I. A. B. Allen, H. S. Le Cates, H. S. Riggin, E. L. Stambaugh.

Censors: O. V. James, J. R. Elliott, U. W. Hocker.

DELAWARE STATE DENTAL SOCIETY—1945

MORRIS GREENSTEIN, *President*, Wilmington.
BLAINE ATKINS, *First Vice-Pres.*, Millsboro.
FRANK M. HOOPES, *Second Vice-Pres.*, Wilmington.
RICHARD H. STUCKLEN, *Secretary*, Wilmington.
HENRY S. KEAVENY, Treasurer, Wilmington.

DELAWARE STATE BOARD OF HEALTH—1945

Bruce Barnes, M. D., *President*, Seaford; Mrs. F. G. Tallman, *Vice-President*, Wilmington; Mrs. Caroline Hughes, *Secretary*, Middletown; J. D. Niles, M. D., Middletown; W. T. Chipman, M. D., Harrington; W. H. Speer, M. D., Wilmington; W. B. Atkins, D. D. S., Millsboro; Mrs. C. M. Dillon, Wilmington; Edwin Cameron, M. D., *Executive Secretary*, Dover.

MEDICAL COUNCIL OF DELAWARE

Hon. Daniel J. Layton, *President*; Joseph S. McDaniel, M. D., *Secretary*; A. King Lotz, M. D.

BOARD OF EXAMINERS, MEDICAL SOCIETY OF DELAWARE

J. S. McDaniel, *President and Secretary*; Wm. Marshall, *Assistant Secretary*; W. E. Bird, W. T. Chipman, P. R. Smith.